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FEDERAL - STATE - PRIVATE  
OPERATIVE SNOW SURVEYS SINCE



# WATER SUPPLY OUTLOOK FOR ARIZONA

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

SALT RIVER VALLEY WATER USERS ASSOCIATION

and

ARIZONA AGRICULTURAL EXPERIMENT STATION

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PROCUREMENT SECTION  
CURRENT SERIAL RECORDS

Data included in this report were obtained by the agencies named above in cooperation with the Federal, State and private organizations listed on the last page of this report.

AS OF  
JAN. 15, 1971

887397

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

### PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

### PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR ARIZONA**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

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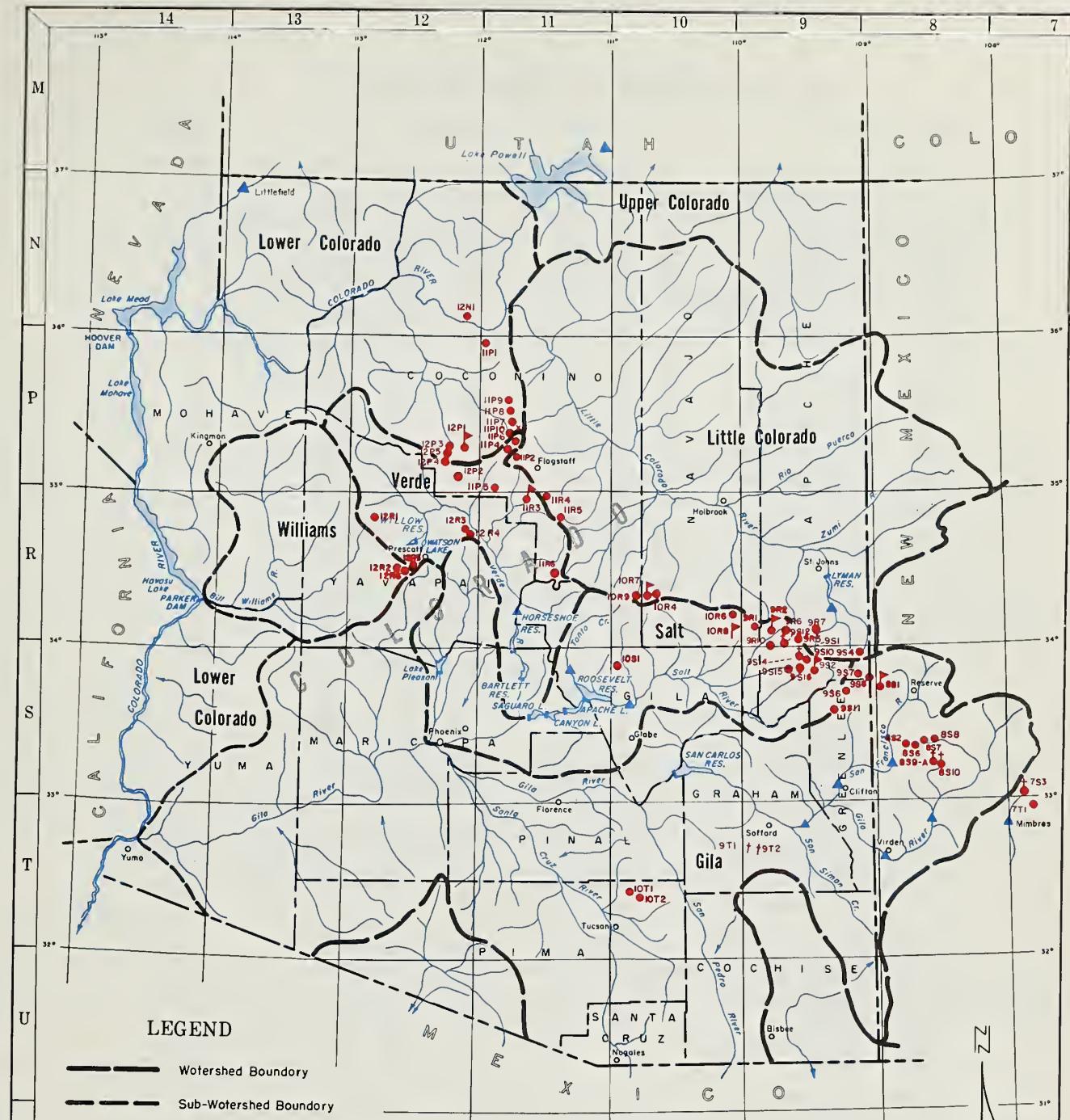
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*Report prepared by*

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**ARIZONA  
COOPERATIVE SNOW SURVEYS**  
Snow Courses and Sub-Watersheds

## Snow Courses and Sub-Watersheds

A horizontal scale bar with markings at 0, 25, 50, and 75 miles. Below the scale bar is the text "SCALE IN MILES".

**INDEX to SNOW COURSES and SOIL MOISTURE STATIONS**

<u>NUMBER</u>	<u>NAME</u>	<u>SEC.</u>	<u>TWP.</u>	<u>RGE.</u>	<u>ELEV.</u>	<u>DRAINAGE</u>	<u>OBSERVER</u>
11P10-A	Agassiz	32	23N	7E	11200	Little Colorado	SCS-USBR
11R6	Baker Butte (p)	4	12N	9E	7300	Verde	SCS
9S1-A	Baldy (p)	28	7N	27E	9125	Little Colorado	SCS
9S15	Baldy #2	12	6N	26E	9750	Little Colorado	SCS-FS
9S16	Baldy #3	13	6N	26E	10950	Little Colorado	SCS-FS
10T1	Bear Wallow	6	12S	16E	8100	Gila	FS
9S6	Beaver Head	13	4N	30E	8000	San Francisco	Pvt-SRP
12P5	Bill Williams Intermediate	17	21N	2E	8550	Cataract	FS
12P4	Bill Williams Summit	17	21N	2E	8950	Verde	FS
9S10-*	Black River Divide	10	6N	27E	9400	Salt	SCS
12N1	Bright Angel	34	33N	3E	8400	Bright Angel Creek	NPS
12R1	Camp Wood	3	16N	6W	5700	Verde	FS
10R7-M	Canyon Creek #2	18	11N	15E	7500	Little Colorado	SCS
10R9	Canyon Point (p)	28	11N	14E	7600	Salt	SCS
12P1-M	Chaledner	27	22N	3E	7100	Verde	FS
9R7	Cheese Springs	28	8N	27E	8600	Little Colorado	SCS
12R6	Copper Basin Divide (p)	23	13N	3W	6720	Verde	SCS
10R8-*	Corduroy Creek	4	8N	21E	6000	Salt	SCS
9S7	Coronado Trail	26	5N	30E	8000	San Francisco	FS
9T2-A	Crazy Horse	34	8S	24E	10200	Gila	FS
7T1	Emory Pass #1	16	16S	9W**	7800	Mimbres	SCS
7T2	Emory Pass #2	16	16S	9W**	7800	Mimbres	SCS
10R6	Forest Dale	2	9N	21E	6430	Salt	BIA
9R5	Ft. Apache	18	7N	27E	9160	Little Colorado	SCS
11P2	Ft. Valley (p)	22	22N	6E	7350	Little Colorado	FS
8S1-M	Frisco Divide	31	6S	20W**	8000	San Francisco	FS
12R4	Gaddes Canyon	11	15N	2E	7600	Verde	Pvt
11P1	Grand Canyon	21	30N	4E	7500	Hance Creek	NPS
9S11	Hannagan Meadows (p)	19	3N	29E	9090	San Francisco	Pvt
11R5	Happy Jack	30	17N	9E	7630	Verde	FS
9R10	Hawley Lake	13	7N	24E	8300	Salt	BIA
10R4	Heber (p)	28	11N	15E	7600	Little Colorado	SCS
9T1-A	High Peak	34	8S	24E	10500	Gila	FS
8S9-A	Hummingbird	19	11S	17W**	10550	Gila	Pvt-SCS
8S6	Ice King	6	11S	18W**	8020	San Francisco	Pvt-SCS
11P9	Inner Basin #1 (p)	28	23N	7E	10000	Little Colorado	SCS-USBR
11P8	Inner Basin #2 (p)	28	23N	7E	9750	Little Colorado	SCS-USBR
11P7	Inner Basin #3	3	23N	7E	10250	Little Colorado	SCS-USBR
12R2	Iron Springs	22	14N	3W	6200	Bill Williams	SCS
9S2-A	Maverick Fork (p)	13	6N	27E	9150	Salt	SCS
7S3-A	McKnight Cabin	10	15S	10W**	9300	Mimbres	Pvt-SCS
9R2-M	McNary	23	8N	23E	7200	Salt	BIA
9R1	Milk Ranch	33	8N	23E	7000	Salt	BIA
12R3	Mingus Mountain	3	15N	2E	7100	Verde	Pvt
8S2	Mogollon	2	11S	19W**	7000	San Francisco	Pvt
11R4	Mormon Lake	13	18N	8E	7350	Little Colorado	SCS
11R3-M-A	Mormon Mountain (p)	14	18N	8E	7500	Verde	SCS
9S12-A	Mt. Ord	4	6N	26E	11200	Salt	SRP-SCS
11P5-M	Newman Park	25	19N	6E	6750	Verde	SCS
9S4	Nutrioso	23	6N	30E	8500	San Francisco	FS
8S7	Redstone Trail	5	11S	18W**	8600	San Francisco	Pvt
10T2	Rose Canyon	15	12S	16E	7300	Gila	FS
8S8	Silver Creek Divide	4	11S	18W**	9000	San Francisco	Pvt
9S14-A	Smith Cienega	10	6N	26E	10050	Salt	SRP-SCS
11P4	Snow Bowl #1 (p)	36	23N	6E	10260	Verde	FS
11P6	Snow Bowl #2	31	23N	7E	11000	Verde	FS
9S8	State Line	6	6S	21W**	8000	San Francisco	FS
12P2	White Horse Lake Jct.	2	20N	2E	7180	Verde	FS
12R5	White Spar	19	13N	2W	6000	Verde	SCS
8S10-A	Whitewater	19	11S	17W**	10750	Gila	Pvt-SCS
12P3	Williams Ski Run	9	21N	2E	7720	Cataract	FS
9R6	Wilson Lake (p)	4	7N	26E	9000	Salt	SCS
10S1	Workman Creek	33	6N	14E	6900	Salt	FS

M      SOIL MOISTURE STA.  
(p)    STORAGE GAGE

A      AERIAL SNOW DEPTH MARKER

\*      SOIL MOISTURE STA. ONLY  
\*\*     NM PRINCIPAL MERIDIAN

## ARIZONA WATER SUPPLY OUTLOOK

JANUARY 15, 1971

\*  
\* The water supply outlook is below average at the start of this  
\* year's water season. Precipitation and snow cover have been below  
\* average on all watersheds with the exception of the Verde River.  
\* However, with the exception of the San Carlos Reservoir, carryover  
\* water storage is above average.

#### SNOW COVER

Snow cover on the watersheds has in general been below average, especially on the higher elevation snow courses. The Verde River Watershed is the exception with snow cover being 163% of average. Snow cover on the Salt River Watershed is 86% of average, but cover on the higher watershed is much lower than this. The cold weather has prevented the snow on the lower elevation snow courses from melting and this has contributed to raising the snow cover average. The snow cover on the Gila River Watershed is especially low, being only 38% of average. Snow courses on the Little Colorado River Watershed measured 79% of average.

## PRECIPITATION

Of the selected National Weather Service precipitation stations, only Flagstaff had above normal precipitation for the month of December. The high elevation storage gages also show below average precipitation since November 1. The Gila River Watershed is the most deficient with about 40% of average and the Verde River Watershed is highest at 80% of average.

## SOIL MOISTURE

Soil moisture measured close to average on all measuring stations with the exception of the Frisco Divide course on the Gila River drainage, which was about 60% of average.

## RESERVOIR STORAGE

The reservoirs of the Salt River Project still have above average carryover storage and an adequate supply for this year's water requirements. Lake Pleasant and Lyman Reservoir also have above average carryover storage. The San Carlos Reservoir is very low, containing only 9900 acre-feet or 10% of average and 1% of capacity. Unless the remaining months of the winter season bring heavy precipitation, the area served by this reservoir will be short of water.



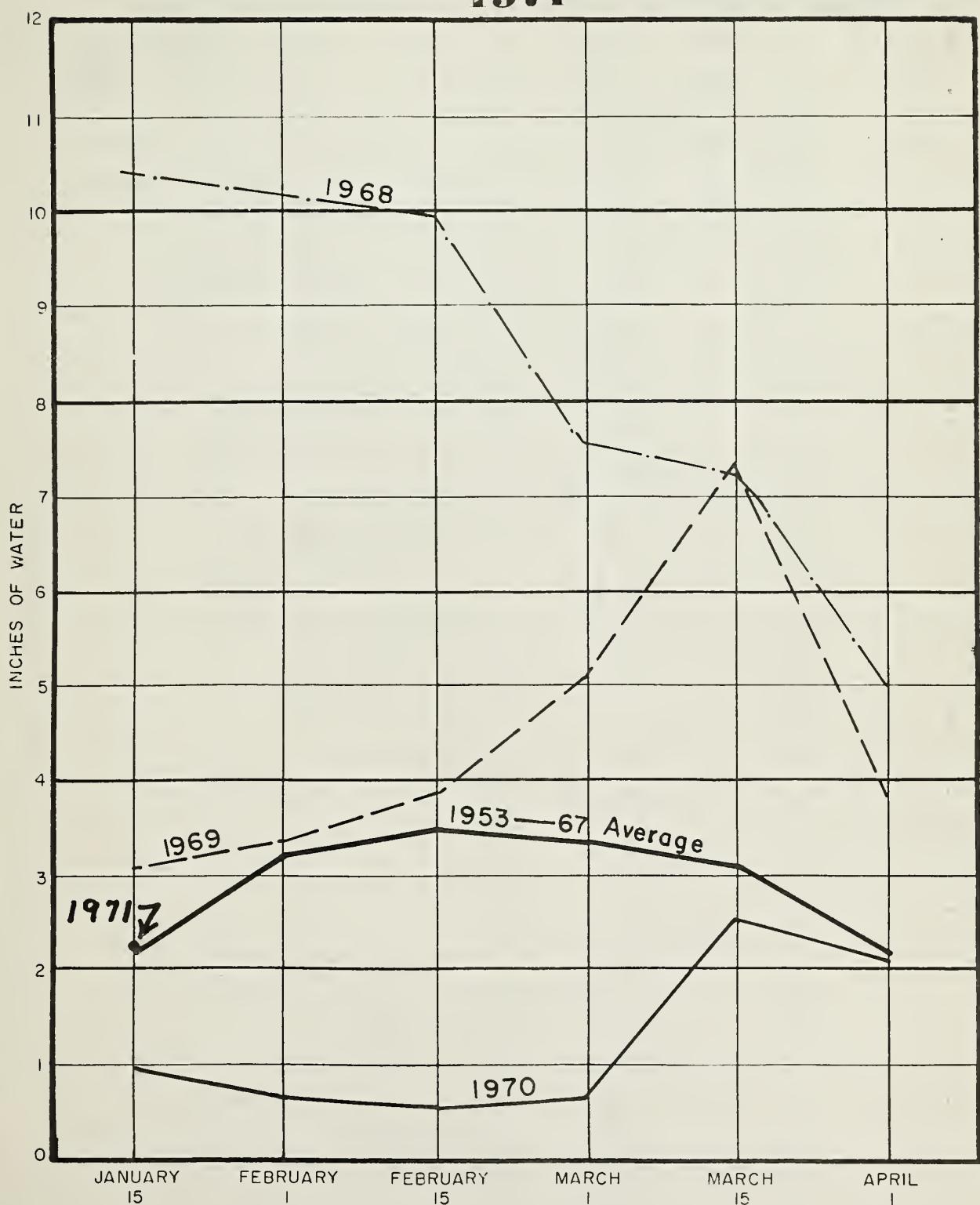
## RESERVOIR STORAGE (Thousand Acre Feet) MID-MONTH READING ABOUT JANUARY 15, 1971

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average <sup>†</sup>
<u>GILA RIVER DRAINAGE</u>					
Agua Fria	Lake Pleasant	157.6	74.4	71.5	40.1
Granite	Watson Lake	4.7	1.7	1.3	---
Granite	Willow Creek	6.1	1.1	2.3	---
Gila	San Carlos	984.6	9.9	197.6	89.4
Verde (2)	Bartlett & Horseshoe	317.7	138.4	87.6	93.4
Salt (4)	Roosevelt, Apache, Canyon & Saguaro	1755.0	945.7	1284.3	909.0
<u>COLORADO RIVER DRAINAGE</u>					
Colorado	Lake Havasu	619.4	540.0	549.0	534.8
Colorado	Lake Mohave	1810.0	1,577.0	1524.8	1652.3
Colorado	Lake Mead	26159.0	16,854.0	16890.0	16754.3
Colorado	Lake Powell	25002.0	12,039.0	9415.0	---
Little Colorado	Lyman	30.6	11.4	18.5	8.7
Little Colorado	Show Low Lake	5.1	.3	0.2	1.3*

<sup>†</sup> Based on 15-year period, 1953-67  
 \* Average is for less than 15 years of record.



# RELATIVE SNOW WATER ACCUMULATION ARIZONA 1971



*This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.*



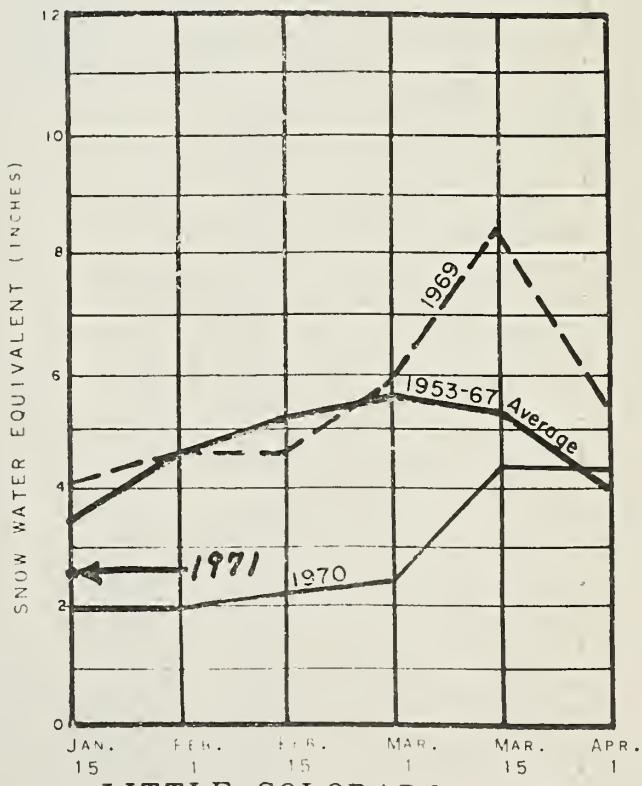
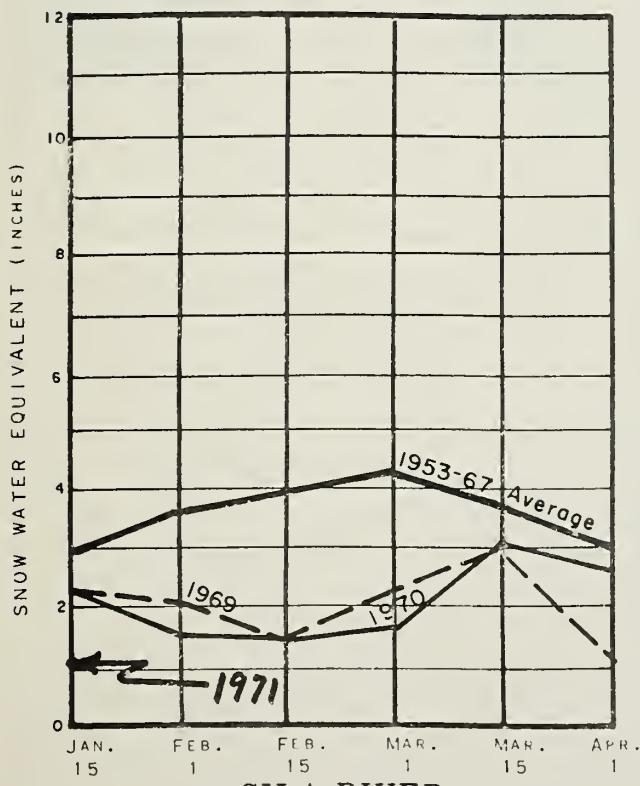
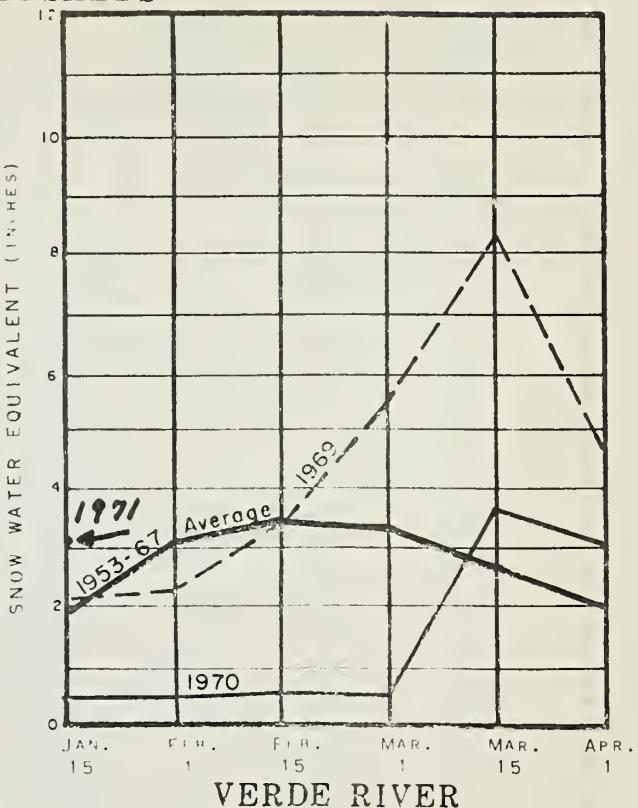
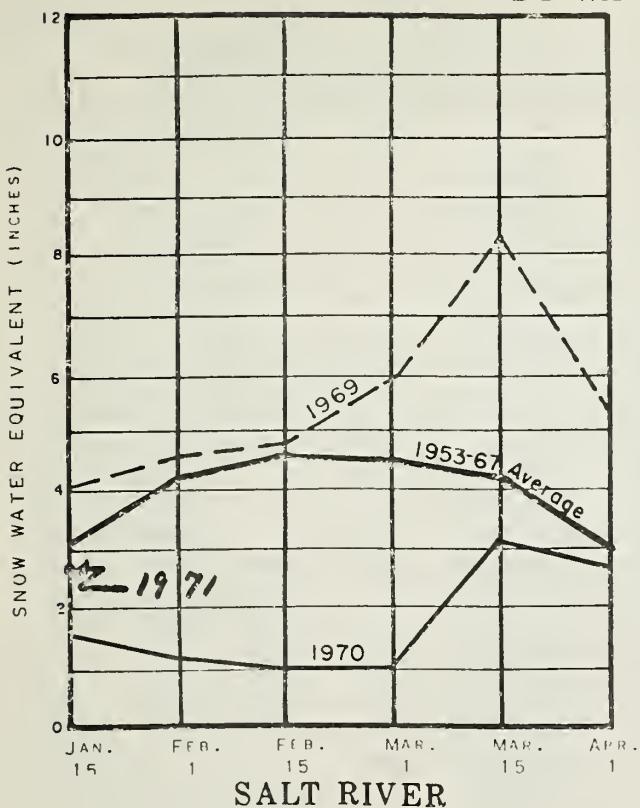
JANUARY 15, 1971

**SUMMARY of SNOW MEASUREMENTS** (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
Gila	10	52	38
Salt	10	168	86
Verde	10	578	163
Little Colorado	5	136	79



# ARIZONA SNOW COVER BY WATERSHEDS





**SNOW**      **EARLY WINTER SURVEYS, 1970-71**

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Last Year	Average +
Agassiz	11200	12/2	33	5.0	NO	NO
Agassiz	11200	1/5	44	10.6	RECORD	RECORD
Baker Butte	7300	12/9	T	0.0	FOR	FOR
Baker Butte	7300	12/23	21	3.9	THIS	THIS
Baker Butte	7300	12/30	15	4.0	PERIOD	PERIOD
Baldy	9125	12/29	8	1.6		
Canyon Creek	7500	12/29	12	3.0		
Canyon Point	7600	12/29	14	3.7		
Copper Basin Divide	6720	1/6	9	3.0		
Forest Dale	6430	12/29	4	1.3		
Fort Valley	7350	12/30	7	1.7		
Happy Jack	7630	12/23	16	2.9		
Happy Jack	7630	12/30	12	2.9		
Inner Basin #1	10100	12/2	12	3.1		
Inner Basin #1	10100	1/6	28	7.7		
Inner Basin #2	9750	12/2	9	1.8		
Inner Basin #2	9750	1/6	21	4.9		
Inner Basin #3	10250	12/2	5	1.0		
Inner Basin #3	10250	1/6	11	2.7		
McNary	7200	12/29	8	2.2		
Mormon Mountain	7500	12/10	4	0.5		
Mormon Mountain	7500	12/23	25	4.7		
Mormon Mountain	7500	12/30	19	4.5		
Newman Park	6750	12/30	12	3.0		
Wilson Lake	9000	12/29	14	2.8		



## SNOW ABOUT JANUARY 15, 1971

DRAINAGE BASIN and/or SNOW COURSE		Date of Survey	THIS YEAR			PAST RECORD	
NAME	Elevation		Snow Depth (Inches)	Water Content (Inches)		Last Year	Average +
<u>GILA RIVER</u>							
Bear Wallow	8100	1/13	9	3.2	0.7	3.1	
Beaver Head	8000	1/14	2	0.4	1.3	2.2	
Coronado Trail	8000	1/15	4	1.2	1.0	2.1	
Crazy Horse (A)	10200	--	--	--	6.6	---	
Emory Pass #1 *	7800	1/14	0	0.0	0.9	---	
Emory Pass #2 *	7800	1/14	2	0.3	0.8	---	
Frisco Divide	8000	1/14	3	0.5	1.5	1.8	
Hannagan Meadows *	9090	1/14	14	2.3	4.0	5.6**	
High Peak (A)	10500	--	--	--	7.0	---	
Hummingbird (A)	10550	1/14	15	4.0	8.6	7.6**	
Ice King	8020	D I S C O N T I N U E D					
McKnight Cabin * (A)	9300	1/14	12	3.4	4.7	---	
Mogollon	7000	1/14	0	0.0	1.6	1.2	
Nutrioso	8500	1/15	4	1.0	0.3	1.5	
Redstone Trail	8600	1/14	9	2.0	3.9	5.1**	
Rose Canyon	7300	1/13	5	1.6	0.0	2.0	
Silver Creek Divide	9000	1/14	12	3.0	6.8	6.3**	
State Line	8000	1/14	3	0.3	0.5	1.9	
Whitewater (A)	10750	1/14	24	5.3	9.4	8.5**	
<u>SALT RIVER</u>							
Baldy *	9125	1/13	11	2.5	2.0	4.2	
Beaver Head	8000	1/14	2	0.4	1.3	2.2	
Canyon Creek	7500	1/12	14	3.7	1.1	1.7**	
Canyon Point	7600	1/12	17	4.3	1.0	1.9**	
Coronado Trail	8000	1/15	4	1.2	1.0	2.1	
Forest Dale	6430	1/13	5	1.6	0.4	0.7	
Ft. Apache	9160	1/13	14	3.0	2.7	4.7	
Hannagan Meadows	9090	1/14	14	2.3	4.0	5.6**	
Hawley Lake	8300	1/13	18	4.4	1.3	3.6**	
Heber	7600	1/14	13	3.4	1.1	1.8	
Maverick Fork	9050	1/13	16	3.1	2.0	5.3	
McNary	7200	1/13	12	2.8	0.4	1.1	
Milk Ranch	7000	1/14	8	2.8	T	0.8	
Mt. Ord (A)	11000	--	--	--	10.0	11.0**	
Nutrioso *	8500	1/15	4	1.0	0.3	1.5	
Smith Cienega (A)	9850	--	--	--	9.5	8.4**	
Wilson Lake	9000	1/13	19	3.9	4.3	5.2**	
Workman Creek	6900	1/12	19	5.2	1.4	3.0	
<u>BILL WILLIAMS RIVER</u>							
Camp Wood *	5700	REPORT DELAYED			0.0	0.4	
Copper Basin Divide	6720	1/14	9	2.0	0.0	1.2**	
Iron Springs	6200	1/14	3	0.8	0.0	0.9	
† 1953-67 15-year period. (*) Adjacent drainage. (**) Water content estimated. Adjusted average. (A) Aerial observations.							



## SNOW ABOUT JANUARY 15, 1971

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	Last Year
VERDE RIVER	Elevation					Average +
Baker Butte	7300	1/14	16	4.2	0.5	2.8**
Camp Wood	5700	REPORT DELAYED			0.0	0.4
Chalender	7100	1/14	10	1.7	0.0	1.5
Copper Basin Divide	6720	1/14	9	2.0	0.0	1.2**
Fort Valley	7350	1/14	7	1.3	0.0	0.9
Gaddes Canyon	7600	1/14	14	2.9	T	2.1**
Happy Jack	7630	1/14	13	3.3	0.0	1.4
Iron Springs *	6200	1/14	3	0.8	0.0	0.9
Mingus Mountain	7100	1/14	6	1.5	0.0	0.6
Mormon Lake *	7350	1/14	16	4.2	0.3	1.6
Mormon Mountain	7500	1/14	19	4.9	0.2	2.2
Newman Park	6750	1/15	12	3.3	0.0	1.2**
Snow Bowl #1	10260	1/13	22	5.2	4.4	4.8**
Snow Bowl #2	11000	1/13	26	5.9	6.4	6.4**
White Horse Lake Jct.	7150	1/13	12	2.0	0.0	---
White Spar	6000	1/14	3	0.8	0.0	0.9**
<u>LOWER COLORADO RIVER</u>						
Bill Williams Intermediate	8550	1/14	21	4.7	1.3	---
Bill Williams Summit	8950	1/14	21	5.9	2.5	---
Bright Angel	8400	--	--	--	---	---
Chalender *	7100	1/14	10	1.7	0.0	1.5
Fort Valley	7350	1/14	7	1.3	0.0	0.9
Grand Canyon	7500	1/14	9	1.9	1.0	1.1
Williams Ski Run	7720	1/13	17	4.0	1.2	---
<u>LITTLE COLORADO RIVER</u>						
Agassiz	11200	--	--	--	---	---
Baldy	9125	1/13	11	2.5	2.0	4.2
Canyon Creek	7500	1/12	14	3.7	1.1	1.7**
Canyon Point	7600	1/12	17	4.3	1.0	1.9**
Cheese Springs	8600	1/13	12	2.3	2.3	---
Forest Dale	6430	1/13	5	1.6	0.4	0.7
Ft. Apache	9160	1/13	14	3.0	2.7	4.7
Fort Valley	7350	1/14	7	1.3	0.0	0.9
Happy Jack *	7630	1/14	13	3.3	0.0	1.4
Heber	7600	1/14	13	3.4	1.1	1.8
Inner Basin #1	10100	--	--	--	8.3	---
Inner Basin #2	9750	--	--	--	4.7	---
Inner Basin #3	10250	--	--	--	5.6	---
McNary	7200	1/13	12	2.8	0.4	1.1
Mormon Lake	7350	1/14	16	4.2	0.3	1.6
Mormon Mountain	7500	1/14	19	4.9	0.2	2.2
Nutrioso	8500	1/15	4	1.0	0.3	1.5
Snow Bowl #1	10260	1/13	22	5.2	4.4	4.8**
Snow Bowl #2	11000	1/13	26	5.9	6.4	6.4**
Wilson Lake *	9000	1/13	19	3.9	4.3	5.2**

+ 1953-67 15-year period. (\*) Adjacent drainage. (\*\*) 1953-67  
 Adjusted average. (A) Aerial observation. Water content estimated.



S N O W P I L L O W D A T A

BAKER BUTTE

Elevation: 7300

10

WATER CONTENT IN INCHES

8

6

4

2

0

WATER CONTENT IN INCHES

APRIL

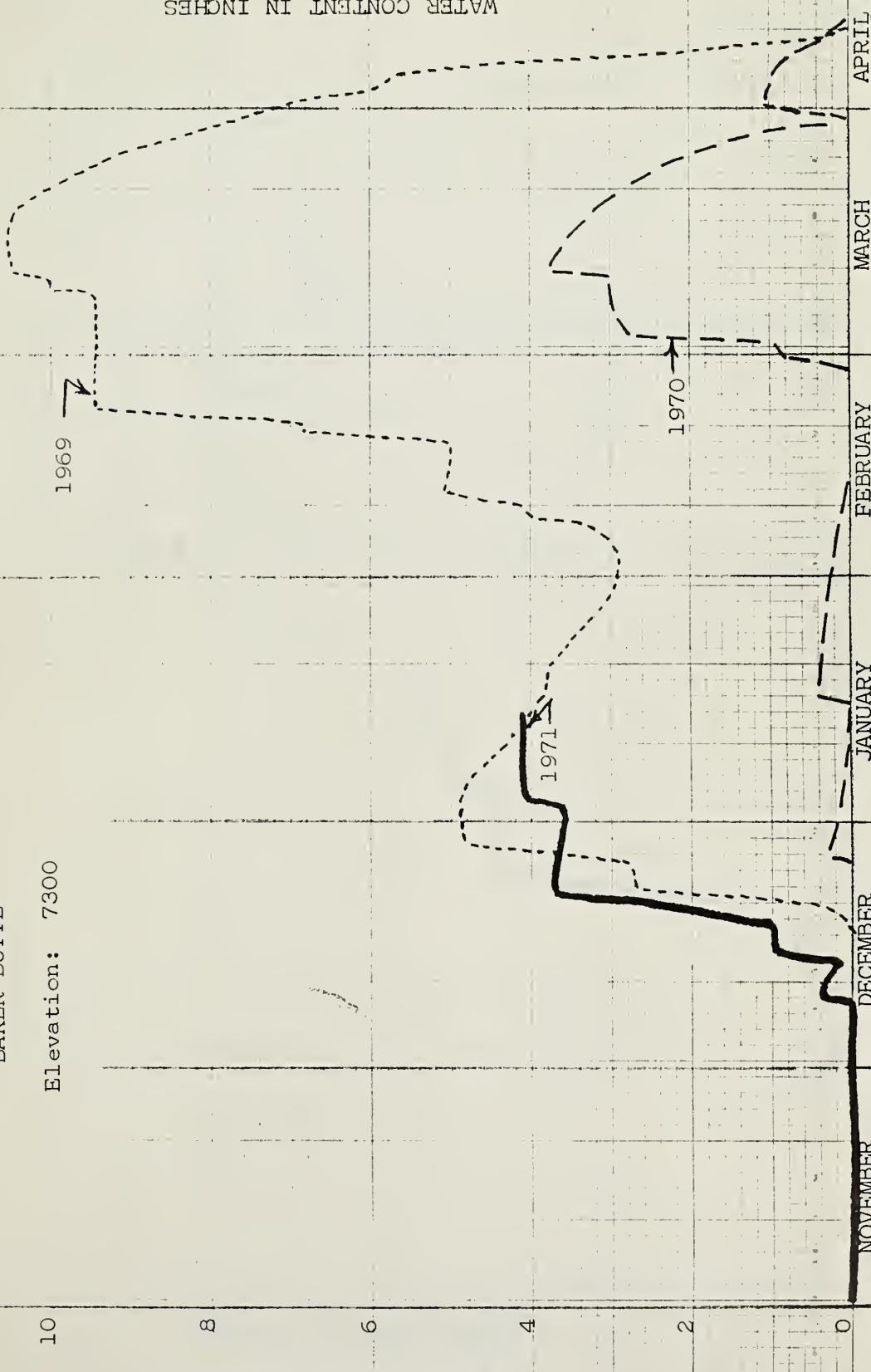
MARCH

FEBRUARY

JANUARY

DECEMBER

NOVEMBER





S N O W P I L L O W D A T A

MORMON MOUNTAIN

Elevation: 7500

WATER CONTENT IN INCHES

10

8

6

4

2

0

10

8

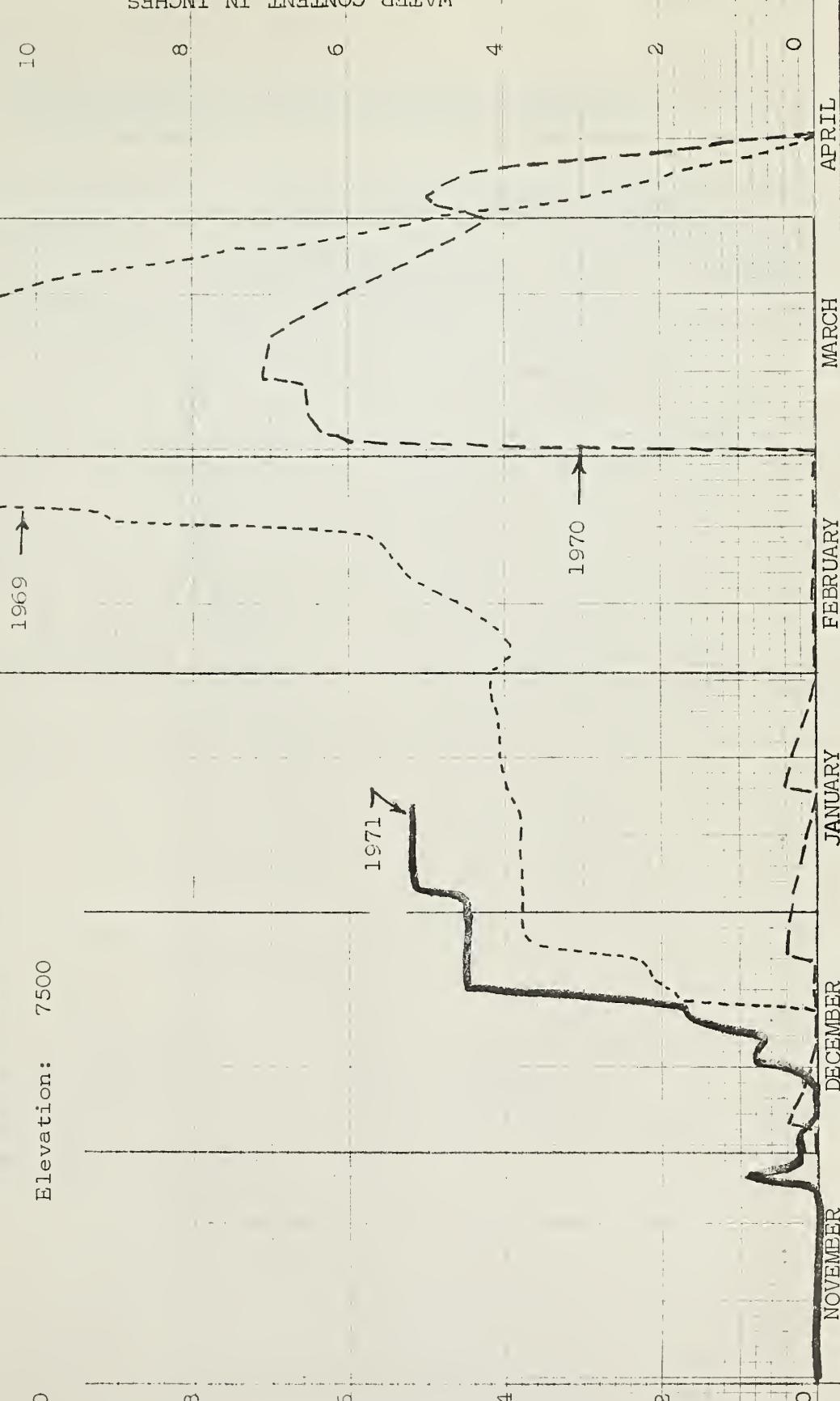
6

4

2

0

WATER CONTENT IN INCHES





PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

STATION	Precipitation (Inches)			
	December - 1970		Current Water Year (Oct. 1970-December 1970)	
	Total	Departure from Normal	Total	Departure from Normal
Alpine	.26	- 1.01	2.97	- .83
Ash Fork	.85	- .33	1.73	- .87
Clifton	.55	- .47	2.30	- .16
Douglas Smelter	.31	- .36	.46	- 1.31
Flagstaff WSO*	2.12	+ .47	3.60	- .57
McNary	2.18	- .19	4.61	- 1.03
Payson Ranger Station	1.56	- .34	2.55	- 2.20
Phoenix WSO *	.26	- .59	.72	- 1.08
Prescott (City)	.83	- .94	2.23	- 1.84
Springerville	.11	- .38	1.57	- .16
Tucson WSO*	.43	- .49	2.16	- .02
Winslow WSO*	.13	- .39	.49	- 1.05
Yuma WSO*	.01	- .31	.05	- .77

1/ Data and Analysis furnished by Paul C. Kangieser,  
NOAA Climatologist for Arizona, National Weather Service, Phoenix

\*  
WSO = Weather Service Office



## PRECIPITATION (Inches)

ABOUT JANUARY 15, 1971

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION			FROM APPROX. NOV. 1 TO DATE		
		Date of Reading	Month's Precipitation	Average +	This Year	Average +	Percent of Average
<u>GILA RIVER</u>							
Silver Creek Divide	9000	1/14	---	---	2.90	---	---
Hannagan Meadows	9030	1/14	.90	1.34*	2.61	6.57*	40
<u>SALT RIVER</u>							
Canyon Point	7600	1/12	1.55	---	7.59	---	---
Hannagan Meadows	9030	1/14	.90	1.34*	2.61	6.57*	40
Little Wildcat (Heber Snow Course)	7600	1/14	1.50	1.77*	5.39	7.30*	74
Maverick Fork	9050	1/13	1.25	1.29*	4.07	6.39*	64
Workman Creek **	6970	1/12	1.30	2.15	6.25	8.90	70
Wilson Lake	9100	1/13	1.05	---	3.77	---	---
<u>VERDE RIVER</u>							
Baker Butte	7300	1/14	.69	---	5.68	---	---
Copper Basin Divide	6720	1/14	.02	---	4.13	---	---
Fort Valley **	7350	1/14	.24	.97	3.57	4.62	77
Happy Jack **	7480	1/14	.49	1.30*	4.39	5.42*	81
Mingus Mountain	7660	1/14	.27	1.00	3.82	4.72	81
Mormon Mountain	7500	1/14	.95	---	7.74	---	---
<u>LITTLE COLORADO</u>							
Inner Basin #1	9830	1/5	---	---	6.75	---	---
Inner Basin #2	10050	1/5	---	---	8.50	---	---
Sheep Crossing (Baldy Snow Course)	9125	1/12	1.15	1.46*	3.40	5.96*	72
Little Wildcat (Heber Snow Course)	7600	1/14	1.50	1.77*	5.39	7.30*	74
+ 1953-67 Average							
* Adjusted Average							
** Data Supplied by U. S. Forest Service							



**SOIL MOISTURE**

ABOUT JANUARY 15, 1971

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +
<u>GILA RIVER</u>							
Frisco Divide	8000	48	13.3	1/14	5.6	8.6	9.7
<u>SALT RIVER</u>							
Black River Divide	9100	48	16.8	1/13	16.6	17.6	14.6
Canyon Creek	7500	48	18.3	1/12	16.2	16.6	15.0
Corduroy Creek	6000	36	13.5	1/12	8.3	9.5	7.9
McNary	7200	48	16.3	1/13	13.8	13.7	14.8
<u>VERDE RIVER</u>							
Mormon Mountain	7500	48	16.1	1/14	14.0	13.5	15.0
Newman Park	6750	48	17.7	1/15	15.1	11.9	14.6
+ 1953-67 15-year average							



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SNOW COURSE

Baker Butte  
Baldy  
Bear Wallow  
Beaver Head  
Bill Williams Intermediate  
Bill Williams Summit  
Bright Angel  
Camp Wood  
Canyon Creek  
Canyon Point  
Chalender  
Cheese Springs  
Copper Basin Divide  
Coronado Trail  
Crazy Horse  
Emory Pass #1 and #2  
Forest Dale  
Ft. Apache  
Fort Valley  
Frisco Divide  
Gaddes Canyon  
Grand Canyon  
Hannagan Meadows  
Happy Jack  
Hawley Lake  
Heber  
High Peak  
Hummingbird  
Inner Basin #1, #2, #3  
Iron Springs  
Maverick Fork  
McKnight Cabin  
McNary  
Milk Ranch  
Mingus Mountain  
Mogollon  
Mormon Lake  
Mormon Mountain  
Mt. Ord  
Newman Park  
Nutrioso  
Redstone Trail  
Rose Canyon  
Silver Creek Divide  
Smith Cienega  
Snow Bowl #1 and #2  
State Line  
White Horse Lake Junction  
White Spar  
Whitewater  
Williams Ski Run  
Wilson Lake  
Workman Creek

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SNOW SURVEYOR

SCS - Dick Enz  
SCS - Bill Cole  
Forest Service - Carl Sollers  
N. A. Josh  
Forest Service - John Sotelo  
Forest Service - John Sotelo  
National Park Service - Kenneth Hulick, Dist. Rgr.  
Forest Service - Walter G. Richardson  
SCS - Dick Enz  
SCS - Dick Enz  
Forest Service - M. Freshour  
SCS - Bill Cole  
SCS - Bill Gray  
Forest Service - John O. Maeder  
Forest Service - Loyd Barnett  
SCS - Jim Powell and Travis Stevenson  
Bureau of Indian Affairs - Raymond Endfield  
SCS - Bill Cole  
Rocky Mountain Forest & Range Exp. Station  
Forest Service - J. M. Sanchez  
Paul G. Lidbeck  
National Park Service - David A. Strope, Dist. Rgr.  
N. A. Josh  
Forest Service - Don W. Witt  
Bureau of Indian Affairs - Raymond Endfield  
SCS - Dick Enz  
Forest Service - Loyd Barnett  
Ray Freeman  
SCS and USBR - Jack Jorgensen and Jay Roberts  
SCS - Bill Gray  
SCS - Bill Cole  
Ray Freeman  
Bureau of Indian Affairs - Raymond Endfield  
Bureau of Indian Affairs - Raymond Endfield  
Paul G. Lidbeck  
James Lyon  
SCS - Jack Jorgensen  
SCS - Jack Jorgensen  
Salt River Project - Bill Warskow  
SCS - Jack Jorgensen  
Forest Service - John O. Maeder  
James Lyon  
Forest Service - Carl Sollers  
James Lyon  
Salt River Project - Bill Warskow  
Forest Service - Ky Porter  
Forest Service - J. M. Sanchez  
Forest Service - John Sotelo  
SCS - Bill Gray  
Ray Freeman  
Forest Service - John Sotelo  
SCS - Bill Cole  
Rocky Mtn. Forest & Range Exp. Station



## The Following Organizations Cooperate in the Arizona Snow Survey Work

### FEDERAL

Department of Agriculture  
Soil Conservation Service  
Forest Service  
Apache Forest  
Coconino Forest  
Coronado Forest  
Gila Forest  
Kaibab Forest  
Prescott Forest  
Rocky Mountain Forest and Range Experiment Station  
Tonto Forest

Department of Commerce  
Weather Bureau  
Arizona Section

Department of Interior  
Bureau of Reclamation  
Region III  
Geological Survey  
Arizona District  
Bureau of Indian Affairs  
Fort Apache Reservation  
San Carlos Irrigation Project  
National Park Service  
Grand Canyon National Park

Gila Water Commissioner  
Safford, Arizona

### STATE

University of Arizona  
Arizona Agricultural Experiment Station  
Water Resource Research Center

### IRRIGATION PROJECTS

Salt River Valley Water Users' Association  
Phoenix, Arizona  
San Carlos Irrigation and Drainage District  
Coolidge, Arizona

### PRIVATE

Southwest Forest Industries, Inc.  
McNary, Arizona

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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SOIL CONSERVATION SERVICE  
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*"The Conservation of Water begins  
with the Snow Survey."*